CONTENTS OF *ANIMAL REPRODUCTION SCIENCE*, VOLUME 21

VOL. 21 NO. 1 NOVEMBER 1989

Ovarian control of gonadotrophin secretion in the prepubertal heifer
S.E. Dodson, B.J. McLeod, W. Haresign, A.R. Peters, G.E. Lamming and D. Das (Loughborough, Great Britain) 1

Involution, pathology and histology of the uterus in dairy cattle with retained placenta and uterine discharge following GnRH
L.C. Holt, W.D. Whittier, F.C. Gwazdauskas, W.E. Vinson and P.S. Sponenberg (Blacksburg, VA, U.S.A.) 11

Opposite breeding seasons in dairy Zebu cows and dairy River buffaloes as assessed by first insemination records
S. Nasir Hussain Shah (Peshawar, Pakistan), D.F.M. van de Wiel (Zeist, The Netherlands), A.H. Willemse (Utrecht, The Netherlands) and B. Engel (Wageningen, The Netherlands) 25

Quantitative analysis of oestrous behaviour through the breeding season in two breeds of sheep
C.J. Fabre-Nys and G. Venier (Monnaie, France) 37

Endocrine changes associated with spontaneous luteolysis in sows. II. Temporal relationships among the concentrations of A_4, T, E_1 and E_2 measured in utero-ovarian vein plasma
R. Ciereszko, L. Dusza, S. Okrasa, G. Kotwica (Olsztyn, Poland) and J.E. Tilton (Fargo, ND, U.S.A.) 53

Size and shape changes in the preovulatory follicle in mares based on digital analysis of ultrasonic images
D.H. Townson and O.J. Ginther (Madison, WI, U.S.A.) 63

Short Communication

Mating-dependent endocrinological variations in female *Camelus dromedarius*
F. Cristofori, G. Aria, L. Vincenti, S. Callegari (Torino, Italy), A.S. Aaden and A.M. Gheddi (Mogadishu, Somalia) 73

VOL. 21 NO. 2 15 DECEMBER 1989

Silent oestrus manifestation in Nigerian Bunaji Zebu cows
P.M. Dawuda, L.O. Eduvie, K.A.N. Esievo and E.C.I. Molokwu (Zaria, Nigeria) 79

Effect of prostaglandins on characteristics of buffalo semen at 4 °C
G.V. Ramana, B.B. Reddy, K. Kesava Reddy, A.S.N. Murthy and G.B. Haranath (Tirupati, India) 87

The effect of pregnant mare serum gonadotropin on follicle stimulating hormone and estradiol secretion in the prepuberal gilt
B. Flowers, M.J. Martin, T.C. Cantley and B.N. Day (Columbia, MO, U.S.A.) 93

Plasma, LH corticoid and sex steroid variations in camels (*Camelus dromedarius*) in relation to seasonal climatic changes
G. Bono (Udine, Italy), A. Moallin Dahir (Mogadishu, Somalia), A. Comin (Udine, Italy) and M. Ahmed Jumale (Mogadishu, Somalia) 101

The effect of season, frequency and duration of contact with boars on the attainment of

puberty in gilts
A.M. Paterson (South Perth, W.A., Australia), P.E. Hughes (Parkville, Vic., Australia) and G.P. Pearce (Nedlands, W.A., Australia) 115
Fertilization of zona-free hamster ova by ionophore-treated boar sperm and the condensation of sperm chromosomes
J.M. Bird and J.A. Houghton (Galway, Ireland) 125
Comparison of α-chlorohydrin and two aromatic ketal analogues as antifertility agents in male rats
P.D.C. Brown-Woodman (Lidcombe, N.S.W., Australia), I.G.White and D.D. Ridley (Sydney, N.S.W., Australia) 141

Short Communication
Luteolytic effect of a low dose of cloprostenol monitored by changes in vaginal resistance in suboestrous buffaloes
A.V. Narasimha Rao and P. Venkatramaiah (Visakhapatnam, India) 149

VOL. 21 NOS. 3/4 — 30 DECEMBER 1989

Oestrous behaviour of Baoule cows (*Bos taurus*) in Burkina Faso
P. Chicoteau, E. Mamboue, C. Cloe and A. Bassinga (Bobo-Dioulasso, Burkina Faso) 153
Development of day 7 bovine demi-embryos transferred into virgin and repeat-breeder heifers
A. Albihn, H. Gustafsson, H. Rodriguez-Martinez and K. Larsson (Uppsala, Sweden) 161
Influence of season and parity on several reproductive parameters in Nili-Ravi buffaloes in Pakistan
S. Nasir Hussain Shah (Peshawar, Pakistan), A.H. Willemse (Utrecht, The Netherlands), D.F.M. van de Wiel (Zeist, The Netherlands) and B. Engel (Wageningen, The Netherlands) 177
In vitro incorporation of (I-^{14}C) acetate and (U-^{14}C) glucose into the lipids of buffalo bull spermatozoa
K.S. Sidhu, R. Sundhey and S.S. Guraya (Ludhiana, India) 191
Follicular growth during the oestrous cycle in Peul sheep
A. Yenikoye (Niamey, Niger), J.C. Mariana (Nouzilly, France) and G. Celeux (Le Chesnay, France) 201
Effect of the stage of the oestrous cycle and the frequency of sample collection on the composition of ovine uterine fluids
C.J. Ashworth, I. Wilmut and D.I. Sales (Roslin, Great Britain) 213
Flow and composition of ovarian lymph during pregnancy and luteolysis in the ewe
W.R. Hein, J.N. Shelton, M.W. Simpson-Morgan (Canberra, A.C.T., Australia), R.F. Seamark (Woodville, S.A., Australia) and B. Morris (Canberra, A.C.T., Australia) 223
The efficacy of ram introduction, GnRH administration, and immunisation against androstenedione and oestrone for the induction of oestrus and ovulation in anoestrous post-partum ewes
P.J. Wright (Werribee, Vic., Australia), P.E. Geytenbeek (Adelaide, S.A., Australia), I.J. Clarke (Melbourne, Vic., Australia) and R.M. Hoskinson (Prospect, N.S.W., Australia) 237
Seasonal variation in LH and testosterone responses of rams following the introduction of oestrous ewes
R. Gonzalez, P. Orgeur, P. Poindron and J.P. Signoret (Nouzilly, France) 249

Resurgence of the primary corpus luteum during pregnancy in the mare
D.R. Bergfelt, R.A. Pierson and O.J. Ginther (Madison, WI, U.S.A.) 261
Laparoscopic examination of the ovarian activity in alpacas
P.W. Bravo (Davis, CA, U.S.A.) and J. Sumar (Lima, Peru) 271
Influence of substance P on myoelectrical activity of the infundibulum, uterus and vagina in the conscious domestic hen
V. de Saedeleer, E. Wechsung and A. Houvenaghel (Antwerp, Belgium) 283
Influence of substance P on in vitro motility of the oviduct and intestine in the domestic hen
V. de Saedeleer, E. Wechsung and A. Houvenaghel (Antwerp, Belgium) 293
Stimulation of the motility and oxygen consumption of fowl spermatozoa by bicarbonate at 40°C
K. Ashizawa, S. Masazumi and K. Okauchi (Miyazaki, Japan) 301

Author Index 309

Subject Index 313

Contents of *Animal Reproduction Science*, Volume 21 317